

**WHAT IS CLAIMED IS:**

1. An ecological block for constructing a bank protection wall especially on the slope of a riverbank, wherein at least one truncated conical projection adapted for convenient piling up a block structure on another block structure is provided at the upper part of the block body of said ecological block; at least one groove in which said truncated conical projection is engaged is provided at the lower part of the block body of said ecological block; a channel-shaped space in which stones are filled and water grasses are planted during the construction of the bank protection wall is provided at either side of the block body of said ecological block; a through-hole adapted for improving combination and construction of said block structure on the slope of the riverbank is provided approximately at the central part of the block body of said ecological block, said through-hole also functioning as a hiding-place for amphibious animals and insects; and channel-shaped grooves along which the amphibious animals and insects move and rainwater is drained are provided at the front part of the block body of said ecological block, said channel-shaped grooves being arranged about said through-hole in the form of a diamond.

2. The ecological block as claimed in claim 1, wherein the block body of said ecological block is formed such that the rear surface and the front surface of the block body of said ecological block are inclined at the slope rate of 1:0.3 to the bottom surface of the block body of said ecological block.

3. An ecological block for constructing a bank protection wall especially on the slope of a riverbank, wherein at least one truncated conical projection adapted for

convenient piling up a block structure on another block structure is provided at the upper part of the block body of said ecological block; at least one groove in which said truncated conical projection is engaged is provided at the lower part of the block body of said ecological block; a channel-shaped space in which stones are filled and water  
5 grasses are planted during the construction of the bank protection wall is provided at either side of the block body of said ecological block; and a channel-shaped groove along which the amphibious animals and insects move and rainwater is drained is provided vertically at the central part of the block body of said ecological block.

10 4. The ecological block as claimed in claim 3, wherein the block body of said ecological block is formed such that the rear surface and the front surface of the block body of said ecological block are inclined at the slope rate of 1:0.3 to the bottom surface of the block body of said ecological block.

15 5. An ecological block for constructing a retaining wall especially on the cut-area or the cut-slope of a road, wherein at least one truncated conical projection adapted for convenient piling up a block structure on another block structure is provided at the upper part of the block body of said ecological block; at least one groove in which said truncated conical projection is engaged is provided at the lower part of the block  
20 body of said ecological block; a channel-shaped space in which stones are filled and trees and grasses are planted during the construction of the retaining wall is provided at either side of the block body of said ecological block; and a channel-shaped space adapted for reducing the noise due to the travel of a vehicle during the construction of the retaining wall is provided at the front part of the block body of said ecological block,  
25 said channel-shaped groove provided at the front part of the block body of said

ecological block being communicated with said channel-shaped space provided at either side of the block body of said ecological block.

6. An ecological block for constructing a retaining wall especially on the cut-area or the cut-slope of a road, wherein at least one truncated conical projection adapted for convenient piling up a block structure on another block structure is provided at the upper part of the block body of said ecological block; at least one groove in which said truncated conical projection is engaged is provided at the lower part of the block body of said ecological block; a channel-shaped space in which stones are filled and trees and grasses are planted during the construction of the retaining wall is provided at either side of the block body of said ecological block; and V channel-shaped grooves adapted for reducing the noise due to the travel of a vehicle during the construction of the retaining wall are provided at the front part of the block body of said ecological block approximately in the form of a diamond.

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7. A method for constructing an ecological vegetation bank protection wall using an ecological block, the method comprising the steps of:

depositing and curing fundamental concrete on the readjusted river bed at a riverbank;

20 spreading a thread sheet for preventing overflow of soil and sand along the upper part of said fundamental concrete and the slope of said riverbank;

providing a first stack of ecological blocks on said fundamental concrete approximately up to a half of the total vertical height of the slope of said riverbank, each of said ecological blocks including a truncated conical projection and a corresponding groove provided at the upper and lower parts of the block body of said ecological block

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respectively, a channel-shaped space provided at either side of the block body of said ecological block, and traveling passages for amphibious animals and insects provided at the front part of the block body of said ecological block;

filling relatively large stones in the space between the rear surfaces of said first stacked blocks and the slope of said riverbank where said thread sheet is spread to stabilize the stacking state;

providing a second stack of ecological blocks similar to said first stacked blocks in series on said first stacked blocks up to the upper end of the slope of said riverbank;

spreading a thread sheet closely on the rear surfaces of said second stacked blocks and filling pebbles, soil and sand in the space between the rear surfaces of said thread sheet and the slope of said riverbank to stabilize the stacking state; and

filling stones, soil and sand and planting water grasses in a closed space formed between the neighboring blocks by the channel-shaped spaces provided at the sides of said ecological blocks of said riverbank formed by said first and second stack.

8. The method as claimed in claim 7, wherein the upper part of said concrete on which said ecological blocks are stacked is formed such that it is inclined at the slope rate of 1:0.2 when said fundamental concrete is deposited.

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9. A method for constructing an ecological vegetation retaining wall using an ecological block, the method comprising the steps of:

depositing and curing fundamental concrete on the edge of a road;

stacking ecological blocks on said fundamental concrete up to a predetermined height, each of said ecological blocks including a truncated conical projection and a

corresponding groove provided at the upper and lower parts of the block body of said ecological block respectively, and channel-shaped grooves provided at either side of the block body of said ecological block and at the front part of the block body of said ecological block respectively for planting trees and grasses and reducing noise;

- 5 spreading a thread sheet for preventing overflow of soil and sand along the rear surfaces of said stacked ecological blocks;

filling soil and stones in the space between the rear surfaces of said stacked blocks where said thread sheet is spread and the cut-slope of the road to stabilize the stacking state; and

- 10 filling stones, soil and sand and planting trees and grasses in a closed space formed between the neighboring blocks by the channel-shaped grooves provided at the sides of said ecological blocks of said retaining wall formed by said stack.